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REDISCOVERY OF *SELENIA AUREA* (BRASSICACEAE) IN TEXAS

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ABSTRACT

Selenia aurea has been rediscovered in Texas, now known from a population in Fannin County, close to the Oklahoma border. The only other known collection of the species in the state was made in about 1832 by M.C. Leavenworth at Ayish Bayou Settlement (now San Augustine), San Augustine County, about 181 miles (292 km) south southeast of the Fannin County plants. The Fannin County plants grow in a seasonally wet, vernal pool along a limestone ridge.

In 2012, an account was published documenting the historical occurrence of *Selenia aurea* Nutt. (Brassicaceae) in Texas (Holmes et al. 2012). The only previously known record of the plant in Texas was a collection made at Ayish Bayou Settlement (now San Augustine), San Augustine County, in about 1832 by Melines C. Leavenworth. The manuscript ended with the following:

> "Comments on the possibility of rediscovery of the species in Texas are appropriate. In short, this is highly unlikely, largely because of habitat loss, the rock outcrops/glades of this part of Texas [glauconite glades of the Weches Formation in deep east-central Texas] have been mined for rock used on local roads. Those remaining intact are in less than pristine condition, largely due to invasion by non-native woody plants such as *Rosa bracteata* (Rosaceae), *Ligustrum sinense* (Oleaceae), and *Lonicera japonica* (Caprifoliaceae) or are privately held, thus have limited or no access. However, the hope remains that the species may still be found in the state, probably in northeast Texas."

Northeast Texas was considered the most promising region for the species because of its known distribution in adjacent Oklahoma (McCurtain, Choctaw, Pushmataha, Atoka, Johnston, and Carter counties; BONAP 2014) and the presence of suitable habitat (limestone glades) in that part of Texas. Specifically, this includes the counties bordering the Red River (Cooke, Grayson, Fannin, Lamar cos., and a limited portion of Red River Co. near White Rock Community). The distribution of the species (BONAP 2014) includes southwest Missouri, southeast Kansas, Arkansas (Ozark Plateau, Arkansas Valley, and Ouachita Mountains), east Oklahoma, and, as included in this paper, northeast Texas.

Since 2012, several trips have been made in Texas, in conjunction with searches for other plants, in an attempt to relocate the *Selenia aurea* in the deep east-central and northeast regions of the state. These searches were unsuccessful.

In recent (2014) processing of collections from northeast Texas made by the senior author in 2001, several specimens of *Selenia aurea*, unbeknown to us, were discovered among them. Unfortunately, in 2001 the collector was unfamiliar with the species and, along with the junior author,

involved with pursuing other plants. Nonetheless, we are pleased to report the rediscovery of the species in the state. While relocation of the species in Texas is a major accomplishment, it is doubtful that this will appreciably alter the conservation status of the species. It does, however, yield information that may encourage further search for the species.

Figure 1. *Selenia aurea* from Limestone County (*Singhurst & White 10322*). Photo by Darrell Vodopich.

Voucher: **Texas**. Fannin Co.: Randolph Hills, [3.73 mi (6.01 km) SSW (168°) of Randolph], ca. 0.3 mi S of jct of Co. Rd. 4715 and Co. Rd. 4720 on Co. Rd. 4715, N side of Co. Rd. 4714, seasonally wet, vernal pool along ridge top, area of Austin Chalk prairie and glades, 6 Apr 2001, *J. Singhurst and M. White 10332* (BAYLU). Figure 1.

The *Selenia aurea* site in Fannin County is located on a ridge top that is part of the Randolph Hills, a series of hills south of Randolph, Texas. The ridge top consists of Austin Chalk limestone — the vegetation along the ridge includes Blackland Prairie, limestone glades, and hardwood slope forest. The prairie portion is characterized by *Schizachyrium scoparium*, *Bouteloua curtipendula*, and *Sporobolus compositus*. The glades are dominated by *Juniperus ashei*, *Ceanothus herbacea*, *Rhus trilobata*, *Cercis canadensis* var. *texensis*, *Lonicera sempervirens*, *Baptisia australis*, *Echinacea angustifolia*, *Marshallia caespitosa*, *Penstemon cobaea*, *Hedeoma reverchonii*, *Paronychia virginica*, *Astragalus nuttallianus*, *Stenaria nigricans*, *Thelesperma filifolium*, *Galium virgatum*, *Solidago* spp., *Brickellia eupatorioides*, *Scutellaria drummondii*, *Allium drummondii*, *Sisyrinchium* sp., *Physaria gracilis*, *Draba cuneifolia*, and *Bouteloua rigidiseta*. The hardwood slope forest is dominated by *Quercus buckleyi*, *Ulmus crassifolia*, *Sideroxylon lanuginosa*, *Viburnum rufidulum*, *Cornus drummondii*, *Forestiera pubescens*, *Cocculus carolinus*, and *Smilax bona-nox*. The forest understory includes *Carex planostachys*, *Dichanthelium* sp., *Geum canadense*, and a small patch of *Orobanche uniflora*.

The population of *Selenia aurea* consisted of slightly less than 50 plants in about a two meter square, seasonally wet, vernal pool (within a glade along the ridge) containing thinly developed clay sediments, various mosses, and *Nostoc* sp. (Nostocaceae). All plants in the population were in fruit.

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